CLAIMS:

What is claimed is:

1. A method for configuring an automated data storage library having one or more storage frames, each said storage frame having a plurality of storage shelves, wherein said method comprises the steps of:

(A) selecting a media type of a first storage frame;

(B) assigning storage addresses for said plurality of storage shelves in said first storage frame;

(C) incrementing a storage frame number;

(D) in response to detecting said selected media type in a storage frame specified by said storage frame number:

assigning storage addresses for said plurality of storage shelves in said storage frame specified by said storage frame number;

(E) incrementing said storage frame number;

(F) in response to detecting that said storage frame number is not greater than a total number of storage frames, returning to step D;

(G) in response to detecting that storage addresses have not been assigned to said plurality of storage shelves in all of said storage frames:

setting said storage frame number to the next frame with no assigned storage addresses;

selecting a media type of said next frame with no assigned storage addresses;

returning to step D;

(H) resuming operation of said automated data storage library.

2. The method of claim 1, wherein the assigning of storage addresses sub-step of step D further comprises the steps of:

(A) determining the storage address of the last storage shelf of the previous storage frame containing said selected media type;

(B) assigning a storage address for a first storage shelf of said storage frame specified by said storage frame number that is greater than said storage address of the last storage shelf of the previous storage frame containing said selected media type.

3. The method of claim 2, wherein step B further comprises the step of:

assigning said storage address for said first storage shelf of said storage frame specified by said storage frame number that is equal to one plus said storage address of the last storage shelf of the previous storage frame containing said selected media type.

4. The method of claim 1, further comprising the step of:

assigning consecutive storage addresses to said storage shelves of consecutive storage frames configured for the same media type.

5. The method of claim 1, wherein said automated data storage library further comprises at least one accessor, a bar code reader mounted on said accessor, a library controller for operating said automated data storage library, said library controller coupled to said bar code reader for detecting the output of said bar code reader and coupled to said accessor for operating said accessor and a bar code label positioned on said one or more storage frames for reading by said bar code reader, said bar code label comprising encoded information for identifying said media type for said one or more storage frames, wherein said method comprises the additional steps of:

(A) moving said bar code reader to one or more of said storage frames;

(B) reading said bar code label positioned on said one or more storage frames;

(C) selecting said media type for said one or more storage frames by decoding said encoded information.

6. The method of claim 1, comprising the additional step of:

configuring said automated data storage library into multiple logical libraries wherein each said logical library comprises one or more storage frames configured for the same media type.

7. The method of claim 1, comprising the additional step of:

constructing a directory of information identifying said media type for said one or more storage frames.

8. The method of claim 1, comprising the additional step of:

constructing a directory of information identifying said storage addresses for said storage shelves for said one or more storage frames.

9. An automated data storage library comprising:

one or more storage frames, each said storage frame having a plurality of storage shelves;

at least one accessor;

a bar code reader mounted on said accessor;

a library controller for operating said automated data storage library, said library controller coupled to said bar code reader for detecting the output of said bar code reader and coupled to said accessor for operating said accessor;

a bar code label positioned on said one or more storage frames for reading by said bar code reader, said bar code label comprising encoded information for identifying a media type for said one or more storage frames;

wherein said controller is programed to perform method steps comprising:

(A) selecting a media type of a first storage frame;

(B) assigning storage addresses for said plurality of storage shelves in said first storage frame;

(C) incrementing a storage frame number;

(D) in response to detecting said selected media type in a storage frame specified by said storage frame number:

assigning storage addresses for said plurality of storage shelves in said storage frame specified by said storage frame number;

(E) incrementing said storage frame number;

(F) in response to detecting that said storage frame number is not greater than a total number of storage frames, returning to step D;

(G) in response to detecting that storage addresses have not been assigned to said plurality of storage shelves in all of said storage frames:

setting said storage frame number to the next frame with no assigned storage addresses;

selecting a media type of said next frame with no assigned storage addresses;

Returning to step D;

(H) resuming operation of said automated data storage library.

10. The automated data storage library of claim 9, wherein the assigning of storage addresses sub-step of step D further comprises the steps of:

(A) determining the storage address of the last storage shelf of the previous storage frame containing said selected media type;

(B) assigning a storage address for a first storage shelf of said storage frame specified by said storage frame number that is greater than said storage address of the last storage shelf of the previous storage frame containing said selected media type.

11. The automated data storage library of claim 10, wherein step B further comprises the step of:

assigning said storage address for said first storage shelf of said storage frame specified by said storage frame number that is equal to one plus said storage address of the last storage shelf of the previous storage frame containing said selected media type.

12. The automated data storage library of claim 9, wherein said controller is programmed to perform the additional method step comprising:

assigning consecutive storage addresses to said storage shelves of consecutive storage frames configured for the same media type.

13. The automated data storage library of claim 9, wherein said controller is programmed to perform additional method steps comprising:

(A) moving said bar code reader to one or more of said storage frames;

(B) reading said bar code label positioned on said one or more storage frames;

(C) selecting said media type for said one or more storage frames by decoding said encoded information.

14. The automated data storage library of claim 9, wherein said controller is programmed to perform the additional method step comprising:

configuring said automated data storage library into multiple logical libraries wherein each said logical library comprises one or more storage frames configured for the same media type.

15. The automated data storage library of claim 9, wherein said controller is programmed to perform the additional method step comprising:

constructing a directory of information identifying said media type for said one or more storage frames.

16. The automated data storage library of claim 9, wherein said controller is programmed to perform the additional method step comprising:

constructing a directory of information identifying said storage addresses for said storage shelves for said one or more storage frames.

17. An article of manufacture comprising a data storage medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform method steps for configuring an automated data storage library having one or more storage frames, each said storage frame having a plurality of storage shelves, said method steps comprising:

(A) selecting a media type of a first storage frame;

(B) assigning storage addresses for said plurality of storage shelves in said first storage frame;

(C) incrementing a storage frame number;

(D) in response to detecting said selected media type in a storage frame specified by said storage frame number:

assigning storage addresses for said plurality of storage shelves in said storage frame specified by said storage frame number;

(E) incrementing said storage frame number;

(F) in response to detecting that said storage frame number is not greater than a total number of storage frames, returning to step D;

(G) in response to detecting that storage addresses have not been assigned to said plurality of storage shelves in all of said storage frames:

setting said storage frame number to the next frame with no assigned storage addresses;

selecting a media type of said next frame with no assigned storage addresses;

Returning to step D;

(H) resuming operation of said automated data storage library.

18. The article of manufacture of claim 17, wherein the assigning of storage addresses sub-step of step D further comprises the steps of:

(A) determining the storage address of the last storage shelf of the previous storage frame containing said selected media type;

(B) assigning a storage address for a first storage shelf of said storage frame specified by said storage frame number that is greater than said storage address of the last storage shelf of the previous storage frame containing said selected media type.

19. The article of manufacture of claim 18, wherein step B further comprises the step of: assigning said storage address for said first storage shelf of said storage frame specified by said storage frame number that is equal to one plus said storage address of the last storage shelf of the previous storage frame containing said selected media type.

20. The article of manufacture of claim 17, wherein said method steps further comprise the step of:

assigning consecutive storage addresses to said storage shelves of consecutive storage frames configured for the same media type.

21. The article of manufacture of claim 17, wherein said automated data storage library further comprises at least one accessor, a bar code reader mounted on said accessor, a library controller for operating said automated data storage library, said library controller coupled to said bar code reader for detecting the output of said bar code reader and coupled to said accessor for operating said accessor and a bar code label positioned on said one or more storage frames for reading by said bar code reader, said bar code label comprising encoded information for identifying said media type for said one or more storage frames and wherein said method steps further comprise the steps of:

(A) moving said bar code reader to one or more of said storage frames;

(B) reading said bar code label positioned on said one or more storage frames;

(C) selecting said media type for said one or more storage frames by decoding said encoded information.

22. The article of manufacture of claim 17, wherein said method steps further comprise the step of:

configuring said automated data storage library into multiple logical libraries wherein each said logical library comprises one or more storage frames configured for the same media type.

23. The article of manufacture of claim 17, wherein said method steps further comprise the step of:

constructing a directory of information identifying said media type for said one or more storage frames.

24. The article of manufacture of claim 17, wherein said method steps further comprise the step of:

constructing a directory of information identifying said storage addresses for said storage shelves for said one or more storage frames.